

Date: Mon, 26 Sep 94 12:36:37 PDT
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>
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Precedence: Bulk
Subject: Info-Hams Digest V94 #1065
To: Info-Hams

Info-Hams Digest Mon, 26 Sep 94 Volume 94 : Issue 1065

Today's Topics:

Daily Summary of Solar Geophysical Activity for 20 September
Daily Summary of Solar Geophysical Activity for 21 September
Daily Summary of Solar Geophysical Activity for 22 September

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herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Tue, 20 Sep 94 23:41:14 MDT
From: olivea!charnel.ecst.csuchico.edu!yeshua.marcam.com!zip.eecs.umich.edu!
newsxfer.itd.umich.edu!nntp.cs.ubc.ca!unixg.ubc.ca!quartz.ucla.alberta!
ve6mgs!usenet@ames.arpa
Subject: Daily Summary of Solar Geophysical Activity for 20 September
To: info-hams@ucsd.edu

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DAILY SUMMARY OF SOLAR GEOPHYSICAL ACTIVITY

20 SEPTEMBER, 1994

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(Based In-Part On SESC Observational Data)

SOLAR AND GEOPHYSICAL ACTIVITY INDICES FOR 20 SEPTEMBER, 1994

NOTE: Energetic electron fluence at greater than 2 MeV continued at moderate levels today. The background x-ray flux also continued below A1.0.

```
!!BEGIN!! (1.0) S.T.D. Solar Geophysical Data Broadcast for DAY 263, 09/20/94
10.7 FLUX=069.8  90-AVG=079          SSN=000      BKI=1211 1112  BAI=004
BGND-XRAY=A1.0    FLU1=1.4E+06  FLU10=1.3E+04  PKI=1111 1112  PAI=004
  BOU-DEV=008,014,008,005,007,005,009,017  DEV-AVG=009 NT    SWF=00:000
  XRAY-MAX= A5.3   @ 1432UT    XRAY-MIN= A1.0   @ 2205UT    XRAY-AVG= A1.1
NEUTN-MAX= +002%  @ 2235UT    NEUTN-MIN= -002%  @ 1810UT    NEUTN-AVG= +0.1%
  PCA-MAX= +0.0DB @ 2355UT    PCA-MIN= -0.2DB @ 2315UT    PCA-AVG= -0.1DB
BOUTF-MAX=55216NT @ 2236UT    BOUTF-MIN=55191NT @ 1636UT    BOUTF-AVG=55207NT
GOES7-MAX=P:+000NT@ 0000UT    GOES7-MIN=N:+000NT@ 0000UT    G7-AVG=+083,+000,+000
GOES6-MAX=P:+142NT@ 2102UT    GOES6-MIN=N:-015NT@ 2027UT    G6-AVG=+112,+027,-000
  FLUXFCST=STD:070,070,070;SESC:070,070,070  BAI/PAI-FCST=008,005,005/008,008,008
  KFCST=1133 2221 1133 2221  27DAY-AP=005,013  27DAY-KP=2211 1222 2434 3331
  WARNINGS=
  ALERTS=
!!END-DATA!!
```

NOTE: The Effective Sunspot Number for 19 SEP 94 was 16.5.
The Full Kp Indices for 19 SEP 94 are: 3- 1- 2o 1- 1o 1+ 1- 1o
The 3-Hr Ap Indices for 19 SEP 94 are: 12 3 8 3 4 5 3 4
Greater than 2 MeV Electron Fluence for 20 SEP is: 9.4E+07

SYNOPSIS OF ACTIVITY

Solar activity continued at a very low level. The sun was void of spots during the period. Only minor plages and small filaments were visible.

Solar activity forecast: solar activity should continue very low for the next three days.

The geomagnetic field was predominantly quiet during the period. Energetic electron fluxes ranged from low to high levels.

Geophysical activity forecast: the geomagnetic field should be quiet to slightly unsettled for the next three days.

Event probabilities 21 sep-23 sep

Class M	01/01/01
Class X	01/01/01

Proton 01/01/01
PCAF Green

Geomagnetic activity probabilities 21 sep-23 sep

A. Middle Latitudes
Active 20/15/10
Minor Storm 05/01/01
Major-Severe Storm 01/01/01

B. High Latitudes
Active 25/20/15
Minor Storm 10/05/01
Major-Severe Storm 05/01/01

HF propagation conditions were near-normal over all regions, although the low-level of solar ionizing radiation has resulted in a weakened ionosphere. No changes are expected over the next 72 hours.

STD ESTIMATED CORONAL HOLE BOUNDARY LOCATIONS DERIVED FROM YOHKO X-RAYS

VALID AT 03:10UTC 20SEP94

"!H!" = Highly probable coronal hole locations.
"!W!" = Weak x-ray emissions (possible weak coronal holes).

!!!
! ! DOY=263 VALID=03:10UTC 20SEP94
!H! N60E90 N60E53 N53E35 N53E17 N56E10 N52E03 N49E00 N49W04 N54W04
!H! N57W10 N60W22 N58W27 N52W42 N48W51 N50W67 N50W85 N52W82 N54W84 N55W90
! !
!H! S39W90 S34W54 S28W41 S28W34 S31W24 S29W16 S22W17 S18W08 S20W01
!H! S32E03 S38E03 S46W04 S50W12 S50W27 S54W47 S46W46 S52W61 S55W76 S55W81
!H! S49W59 S48W63 S52W90
! !
!H! S66E90 S56E35 S61E29 S64E14 S70W01 S72W21 S80W54 S66W26 S64W37
!H! S61W37 S63W53 S69W90
! !
!H! S04E33 S00E46 N04E55 N06E53 N09E51 N12E47 N12E41 N08E38 N04E33
!H! N02E27 S02E27 S06E25 S08E23 S08E30 S07E31 S06E30 S04E33
! !
!W! S14W23 S12W29 S08W37 S04W35 N06W29 N10W22 N10W17 N02W17 N00W19
!W! S04W18 S05W16 S02W11 N00W08 S03W05 S06W08 S10W13 S14W23
! !
!W! N19E51 N24E36 N28E28 N31E15 N36E13 N46E14 N46E33 N48E42 N44E38
!W! N39E38 N42E46 N40E51 N43E59 N38E56 N33E47 N26E48 N25E53 N24E57 N20E55
!W! N19E51

!!!

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REGIONS WITH SUNSPOTS. LOCATIONS VALID AT 20/2400Z SEPTEMBER

NMBR LOCATION LO AREA Z LL NN MAG TYPE
7779 N17W30 284 PLAGE
REGIONS DUE TO RETURN 21 SEPTEMBER TO 23 SEPTEMBER
NMBR LAT LO
NONE

LISTING OF SOLAR ENERGETIC EVENTS FOR 20 SEPTEMBER, 1994

BEGIN MAX END RGN LOC XRAY OP 245MHZ 10CM SWEEP SWF
NO EVENTS OBSERVED

POSSIBLE CORONAL MASS EJECTION EVENTS FOR 20 SEPTEMBER, 1994

NO EVENTS OBSERVED

INFERRED CORONAL HOLES. LOCATIONS VALID AT 20/2400Z

ISOLATED HOLES AND POLAR EXTENSIONS
EAST SOUTH WEST NORTH CAR TYPE POL AREA OBSN
NO DATA AVAILABLE FOR ANALYSIS

SUMMARY OF FLARE EVENTS FOR THE PREVIOUS UTC DAY

Date Begin Max End Xray Op Region Locn 2695 MHz 8800 MHz 15.4 GHz

NO EVENTS OBSERVED.

REGION FLARE STATISTICS FOR THE PREVIOUS UTC DAY

C M X S 1 2 3 4 Total (%)
-- -- -- -- --
Uncorrelated: 0 0 0 0 0 0 0 0 000 (0.0)

Total Events: 000 optical and x-ray.

EVENTS WITH SWEEPS AND/OR OPTICAL PHENOMENA FOR THE LAST UTC DAY

Date	Begin	Max	End	Xray	Op	Region	Locn	Sweeps/Optical Observations
-----	-----	-----	-----	-----	--	-----	-----	-----
NO EVENTS OBSERVED.								

NOTES:

All times are in Universal Time (UT). Characters preceding begin, max, and end times are defined as: B = Before, U = Uncertain, A = After. All times associated with x-ray flares (ex. flares which produce associated x-ray bursts) refer to the begin, max, and end times of the x-rays. Flares which are not associated with x-ray signatures use the optical observations to determine the begin, max, and end times.

Acronyms used to identify sweeps and optical phenomena include:

II	= Type II Sweep Frequency Event
III	= Type III Sweep
IV	= Type IV Sweep
V	= Type V Sweep
Continuum	= Continuum Radio Event
Loop	= Loop Prominence System,
Spray	= Limb Spray,
Surge	= Bright Limb Surge,
EPL	= Eruptive Prominence on the Limb.

SPECIAL INSERT: YOHKOH FULL-DISK X-RAY IMAGE

20 September 1994, 03:10 UTC

North

[illegible]

21 SEPTEMBER, 1994

(Based In-Part On SESC Observational Data)

SOLAR AND GEOPHYSICAL ACTIVITY INDICES FOR 21 SEPTEMBER, 1994

NOTE: Energetic electron fluence at greater than 2 MeV dropped to near-normal to moderate levels today. All x-ray statistics were below A1.0 today, for the first time since the rise of this solar cycle.

```
!!BEGIN!! (1.0) S.T.D. Solar Geophysical Data Broadcast for DAY 264, 09/21/94
10.7 FLUX=069.9  90-AVG=079          SSN=000          BKI=2121 2222  BAI=006
BGND-XRAY=A1.0    FLU1=1.5E+06  FLU10=1.2E+04  PKI=2111 2222  PAI=005
  BOU-DEV=014,007,012,005,013,015,013,013  DEV-AVG=011 NT      SWF=00:000
  XRAY-MAX= A1.0   @ 0628UT      XRAY-MIN= A1.0   @ 0636UT      XRAY-AVG= A1.0
NEUTN-MAX= +005%  @ 1700UT      NEUTN-MIN= -002%  @ 1105UT      NEUTN-AVG= +0.2%
  PCA-MAX= +0.9DB @ 1700UT      PCA-MIN= -0.2DB @ 2225UT      PCA-AVG= -0.0DB
BOUTF-MAX=55214NT @ 2223UT      BOUTF-MIN=55190NT @ 1610UT      BOUTF-AVG=55205NT
GOES7-MAX=P:+000NT@ 0000UT      GOES7-MIN=N:+000NT@ 0000UT      G7-AVG=+090,+000,+000
GOES6-MAX=P:+143NT@ 2216UT      GOES6-MIN=N:-013NT@ 1933UT      G6-AVG=+118,+027,+002
  FLUXFCST=STD:070,070,072;SESC:070,070,072  BAI/PAI-FCST=005,005,005/008,008,008
    KFCST=1133 2221 1233 2211  27DAY-AP=013,006  27DAY-KP=2434 3331 0222 1113
WARNINGS=
ALERTS=
!!END-DATA!!
```

NOTE: The Effective Sunspot Number for 20 SEP 94 was 21.9.
 The Full Kp Indices for 20 SEP 94 are: 1+ 1+ 1o 1- 1o 1+ 1+ 2o
 The 3-Hr Ap Indices for 20 SEP 94 are: 5 5 4 3 4 5 5 9
 Greater than 2 MeV Electron Fluence for 21 SEP is: 2.0E+07

SYNOPSIS OF ACTIVITY

Solar activity continued at a very low level. The sun was again void of spots during the period.

Solar activity forecast: solar activity should continue at a very low level for the majority of the next three days. On 24 Sep, old Region 7773 should begin to reappear at the east limb. This region produced 2 M-class and 16 C-class flares last rotation but is not expected to be as active

this rotation.

The geomagnetic field was quiet. Energetic electron fluxes ranged between normal and high levels. It appears the enhancement in these particles which began on 08 Sep is finally beginning to wane.

Geophysical activity forecast: the geomagnetic field should be quiet to slightly unsettled for the next three days.

STD: A well placed transequatorial coronal hole may begin elevating levels of geomagnetic activity slightly as early as 23 or 24 September. A full-disk x-ray image has been appended below.

Event probabilities 22 sep-24 sep

Class M	01/01/01
Class X	01/01/01
Proton	01/01/01
PCAF	Green

Geomagnetic activity probabilities 22 sep-24 sep

A. Middle Latitudes	
Active	15/10/10
Minor Storm	01/01/01
Major-Severe Storm	01/01/01
B. High Latitudes	
Active	20/15/15
Minor Storm	05/01/01
Major-Severe Storm	01/01/01

HF propagation conditions were normal over all regions.
No changes are expected through 24 September inclusive.

STD ESTIMATED CORONAL HOLE BOUNDARY LOCATIONS DERIVED FROM YOHKOH X-RAYS

VALID AT 03:50UTC 21SEP94

"!H!" = Highly probable coronal hole locations.

"!W!" = Weak x-ray emissions (possible weak coronal holes).

!!!

!! DOY=264 VALID=03:50UTC 21SEP94

!H! N67E90 N63E73 N61E59 N62E48 N58E28 N54E24 N52E20 N56E17 N58E07

```

!H!  N58W02 N52W04 N51W07 N52W16 N59W24 N61W36 N61W47 N56W64 N52W81 N52W90
! !
!H!  S40W90 S29W59 S24W56 S24W52 S27W50 S31W46 S34W42 S32W32 S29W24
!H!  S40W22 S43W34 S48W46 S51W54 S47W63 S48W90
! !
!H!  S68E90 S62E40 S61E24 S58E12 S58E02 S68W03 S68W07 S64W11 S68W18
!H!  S82W90 S79W90 S64W47 S68W90
! !
!H!  S12E15 S04E17 S01E23 S00E34 N02E36 N04E41 N08E39 N11E39 N11E36
!H!  N06E30 N07E27 N09E26 N11E28 N14E21 N12E18 N06E14 S08E10 S11E11 S12E15
! !
!W!  S09W32 S06W32 S04W37 N07W32 N12W37 N07W42 S02W47 S03W51 S08W52
!W!  S12W45 S10W38 S09W35 S09W32
!!!

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=====

REGIONS WITH SUNSPOTS. LOCATIONS VALID AT 21/2400Z SEPTEMBER

```

NMBR LOCATION  LO  AREA  Z   LL   NN MAG TYPE
7779  N17W43  284                PLAGE
REGIONS DUE TO RETURN 22 SEPTEMBER TO 24 SEPTEMBER
NMBR LAT    LO
7771 N06    123

```

LISTING OF SOLAR ENERGETIC EVENTS FOR 21 SEPTEMBER, 1994

```

BEGIN  MAX  END  RGN   LOC   XRAY  OP  245MHZ 10CM   SWEEP SWF
      NO EVENTS OBSERVED

```

POSSIBLE CORONAL MASS EJECTION EVENTS FOR 21 SEPTEMBER, 1994

NO EVENTS OBSERVED

INFERRED CORONAL HOLES. LOCATIONS VALID AT 21/2400Z

```

              ISOLATED HOLES AND POLAR EXTENSIONS
      EAST   SOUTH WEST   NORTH  CAR  TYPE  POL  AREA   OBSN
04   N02E25 S16E10 S15E05 N09E22  230  ISO   POS   006 10830A

```

SUMMARY OF FLARE EVENTS FOR THE PREVIOUS UTC DAY

Date	Begin	Max	End	Xray	Op	Region	Locn	2695 MHz	8800 MHz	15.4 GHz
NO EVENTS OBSERVED.										

REGION FLARE STATISTICS FOR THE PREVIOUS UTC DAY

	C	M	X	S	1	2	3	4	Total	(%)
Uncorrelated:	0	0	0	0	0	0	0	0	000	(0.0)

Total Events: 000 optical and x-ray.

EVENTS WITH SWEEPS AND/OR OPTICAL PHENOMENA FOR THE LAST UTC DAY

Date	Begin	Max	End	Xray	Op	Region	Locn	Sweeps/Optical Observations
NO EVENTS OBSERVED.								

NOTES:

All times are in Universal Time (UT). Characters preceding begin, max, and end times are defined as: B = Before, U = Uncertain, A = After. All times associated with x-ray flares (ex. flares which produce associated x-ray bursts) refer to the begin, max, and end times of the x-rays. Flares which are not associated with x-ray signatures use the optical observations to determine the begin, max, and end times.

Acronyms used to identify sweeps and optical phenomena include:

II	= Type II Sweep Frequency Event
III	= Type III Sweep
IV	= Type IV Sweep
V	= Type V Sweep
Continuum	= Continuum Radio Event
Loop	= Loop Prominence System,
Spray	= Limb Spray,
Surge	= Bright Limb Surge,
EPL	= Eruptive Prominence on the Limb.

SPECIAL INSERT: YOHKOH FULL-DISK X-RAY IMAGE

21 September 1994, 03:50 UTC

North

[illegible]

South

KEY: East and west limbs are to the left and right respectively. Emission strength, from minimum to maximum are coded in the following way:

```
[space] . , : ; - + | ! 1 2 3 4 * # @
```

Units used are arbitrary, for illustrative purposes. Get "showasc.zip" from "pub/solar/Software" at the anonymous FTP site: ftp.uleth.ca (IP # 142.66.3.29) to view these images on VGA screens. Remove all but the image data before typing "showasc filename".

** End of Daily Report **

SYNOPSIS OF ACTIVITY

Solar activity was very low. No events were observed. New Region 7781 (S08E07) emerged on the disk.

Solar activity forecast: solar activity is expected to be very low.

STD: The limbs appear quiet in Yohkoh x-ray imagery. If old Region 7773 still exists, it is expected to be in a much diminished state compared to what was observed last solar rotation. A full-disk x-ray image is appended to this report.

The geomagnetic field was quiet. The greater than 2 MeV electron flux at geosynchronous altitude was moderate from 21/2100Z to 22/0000Z and from 22/1100Z to 22/2100Z. Otherwise, the flux was normal.

Geophysical activity forecast: the geomagnetic field is expected to be quiet to unsettled.

STD: A transequatorial coronal hole may begin influencing levels of geomagnetic activity on or near 24 September.

Event probabilities 23 sep-25 sep

Class M	01/01/01
Class X	01/01/01
Proton	01/01/01
PCAF	Green

Geomagnetic activity probabilities 23 sep-25 sep

A. Middle Latitudes

Active	10/10/30
Minor Storm	05/05/20
Major-Severe Storm	01/01/15

B. High Latitudes

Active	10/10/25
Minor Storm	05/05/25
Major-Severe Storm	01/01/20

HF propagation conditions were near-normal over all regions, although MUFs remain fairly low due to the weak state

of the ionosphere. Near-normal conditions should continue until 24 or 25 September when a well placed coronal hole may begin influencing levels of geomagnetic activity and high-latitude signal propagation. Nothing particularly significant is expected from this disturbance.

STD ESTIMATED CORONAL HOLE BOUNDARY LOCATIONS DERIVED FROM YOHKOH X-RAYS

VALID AT 02:30UTC 22SEP94

"!H!" = Highly probable coronal hole locations.

"!W!" = Weak x-ray emissions (possible weak coronal holes).

!!!
! ! DOY=265 VALID=02:30UTC 22SEP94
!H! N68E90 N66E58 N60E28 N56E09 N54W18 N60W57 N53W68 N50W87 N49W90
! !
!H! S34W90 S25W69 S24W63 S26W62 S30W57 S30W49 S28W42 S28W40 S30W33
!H! S31W27 S34W25 S40W27 S46W28 S48W31 S53W53 S50W51 S44W38 S42W36 S41W37
!H! S42W41 S45W43 S46W51 S48W60 S49W73 S47W90
! !
!H! S69E90 S59E23 S62E02 S58W02 S62W15 S69W32 S76W90
! !
!H! N06E28 N10E27 N12E21 N08E18 N06E12 N08E09 N10E05 N08E02 N02W01
!H! S02W05 S08W06 S10W04 S14W04 S17W02 S09E02 S03E05 S01E07 N01E09 N00E11
!H! S03E14 S04E17 S02E20 N02E24 N06E28
! !
!W! N24E59 N27E54 N25E45 N20E44 N14E44 N12E49 N10E54 N12E55 N20E56
!W! N22E56 N24E59
! !
!W! S28E42 S20E46 S10E46 S06E46 S04E39 S05E31 S08E25 S13E24 S16E29
!W! S24E28 S28E21 S28E11 S32E13 S39E21 S35E32 S34E40 S29E39 S28E42
!!!

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===== REGIONS WITH SUNSPOTS. LOCATIONS VALID AT 22/2400Z SEPTEMBER

NMBR LOCATION LO AREA Z LL NN MAG TYPE
7781 S08E07 221 0020 BX0 04 005 BETA
7779 N17W56 284 PLAGE

REGIONS DUE TO RETURN 23 SEPTEMBER TO 25 SEPTEMBER

NMBR LAT LO
7771 N06 123
7773 S08 102

LISTING OF SOLAR ENERGETIC EVENTS FOR 22 SEPTEMBER, 1994

 BEGIN MAX END RGN LOC XRAY OP 245MHZ 10CM SWEEP
 NONE

POSSIBLE CORONAL MASS EJECTION EVENTS FOR 22 SEPTEMBER, 1994

 BEGIN MAX END LOCATION TYPE SIZE DUR II IV
 NO EVENTS OBSERVED

INFERRED CORONAL HOLES. LOCATIONS VALID AT 22/2400Z

 ISOLATED HOLES AND POLAR EXTENSIONS
 EAST SOUTH WEST NORTH CAR TYPE POL AREA OBSN
 04 N05E06 S12W14 S07W17 N05E06 238 ISO POS 005 10830A

SUMMARY OF FLARE EVENTS FOR THE PREVIOUS UTC DAY

 Date Begin Max End Xray Op Region Locn 2695 MHz 8800 MHz 15.4 GHz

 NO EVENTS OBSERVED.

REGION FLARE STATISTICS FOR THE PREVIOUS UTC DAY

 C M X S 1 2 3 4 Total (%)
 --- -- -- -- -- -- -- -- -- --
 Uncorrelated: 0 0 0 0 0 0 0 0 000 (0.0)

Total Events: 000 optical and x-ray.

EVENTS WITH SWEEPS AND/OR OPTICAL PHENOMENA FOR THE LAST UTC DAY

 Date Begin Max End Xray Op Region Locn Sweeps/Optical Observations

 NO EVENTS OBSERVED.

NOTES:

All times are in Universal Time (UT). Characters preceding begin, max,
 and end times are defined as: B = Before, U = Uncertain, A = After.

Acronyms used to identify sweeps and optical phenomena include:

SPECIAL INSERT: YOHKOH FULL-DISK X-RAY IMAGE

North

[illegible]

South

Units used are arbitrary, for illustrative purposes. Get "showasc.zip" from "pub/solar/Software" at the anonymous FTP site: ftp.uleth.ca (IP # 142.66.3.29) to view these images on VGA screens. Remove all but the image data before typing "showasc filename".

End of Info-Hams Digest V94 #1065
